

IN THE CLAIMS:

Please amend claims 1, 9, 14, 15, 17, 20, 21;

cancel claims 13 and 22 without prejudice and disclaimer; and

add new claims 23-27 as follows.

1. (Currently Amended) An apparatus, comprising:

an address management entity comprising at least one queue configured to hold released addresses, said address management entity configured to

detect that a packet has been addressed to a released address held in the at least one queue, and

return the held address to which the packet has been addressed to an end of the at least one queue, and

wherein the size of the at least one queue is variable and depends on ~~stack implementations~~ a number of released addresses of correspondent nodes of previous users ~~of released addresses, and wherein a next address that is selected to be reassigned to a next new user is selected from a first address position of the at least one queue.~~

2. (Previously Presented) The apparatus according to claim 1, wherein said address management entity is further configured to

detect that an address of a user has been released, and

add the released address to the end of the at least one queue.

3. (Previously Presented) An apparatus comprising:

an address management entity comprising at least one queue configured to hold released addresses, said address management entity configured to

detect that a packet has been addressed to a released address held in the at least one queue, and

return the held address to which the packet has been addressed to an end of the at least one queue, wherein said address management entity is further configured to

classify the released address into a group out of at least two address groups, each address group of the at least two address groups having its own queue holding released addresses, and

add the released address to an end of the queue of the classified group, the queues being given a priority order for re-assigning the released addresses held in the queues.

4. (Previously Presented) The apparatus according to claim 1, further comprising:

wherein said address management entity is further configured to send an error notification to a source of a packet upon detection that a packet has been addressed to the released address held in the at least one queue.

5. (Previously Presented) The apparatus according to claim 1, wherein said address management entity is further configured to detect that a packet has been

addressed to the released address held in the at least one queue by receiving the packet addressed to the released address.

6. (Previously Presented) The apparatus according to claim 2, wherein said address management entity is further configured to detect that an address of a user has been released by detecting a loss of a connection which releases its address.

7. (Previously Presented) The apparatus according to claim 1, wherein said address management entity is further configured to detect that a packet has been addressed to the released address held in the at least one queue by receiving an error notification indicating an unused address.

8. (Previously Presented) The apparatus according to claim 2, wherein said address management entity is further configured to detect that an address of a user has been released by receiving a notification thereon.

9. (Currently Amended) An apparatus, comprising:
an address management entity configured to
receive a packet addressed to an unused address, and
send an error notification to a network node configured to manage addresses, the error notification indicating the unused address, wherein the error notification causes a

return of a released address held in a queue and corresponding to the unused address to an end of the queue, the queue holding released addresses, wherein the size of the queue is variable and depends on ~~stack implementations~~ a number of released addresses of correspondent nodes of previous users ~~of released addresses, and wherein a next address~~ that is selected to be reassigned to a next new user is selected from a first address position of the queue.

10. (Cancelled).

11. (Previously Presented) The apparatus according to claim 9, wherein said address management entity is further configured to

detect a loss of a connection which releases its address, and

send a notification about the released address to the network node configured to manage addresses.

12. (Previously Presented) The apparatus according to claim 9, wherein said address management entity is further configured to

send an error notification to a source of the packet upon receipt of the packet addressed to the unused address.

13. (Cancelled)

14. (Currently Amended) A method, comprising:

detecting that a packet has been addressed to a released address held in a queue holding released addresses, said queue operating on a network element; and

returning the held address, to which the packet has been addressed, to an end of the queue, wherein the size of the queue is variable and depends on—~~stack implementations~~ a number of released addresses of correspondent nodes of previous users ~~of released addresses~~, and wherein a next address that is selected to be reassigned to a next new user is selected from a first address position of the queue.

15. (Currently Amended) A method, comprising:

receiving a packet addressed to an unused address; and

sending an error notification to a network node configured to manage addresses, the error notification indicating the unused address, wherein sending the error notification further comprises causing a return of a released address held in a queue and corresponding to the unused address to an end of the queue, the queue holding released addresses, wherein the size of the queue is variable and depends on—~~stack implementations~~ a number of released addresses of correspondent nodes of previous users of released addresses, and wherein a next address that is selected to be reassigned to a next new user is selected from a first address position of the queue.

16. (Cancelled)

17. (Currently Amended) A computer-readable program distribution medium encoding a computer program of instructions being configured to control a processor to perform:

detecting that a packet has been addressed to a released address held in a queue holding released addresses, said queue operating on a network element; and

returning the held address, to which the packet has been addressed, to an end of the queue, wherein the size of the queue is variable and depends on ~~stack implementations~~ a number of released addresses of correspondent nodes of previous users of ~~released addresses~~, and wherein a next address that is selected to be reassigned to a next new user is selected from a first address position of the queue.

18. (Previously Presented) The computer program according to claim 17, further comprising:

a computer-readable medium on which the computer program of instructions are stored.

19. (Previously Presented) The computer program according to claim 17, wherein the computer-readable distribution medium is configured to be directly loadable into an internal memory of the computer.

20. (Currently Amended) An apparatus, comprising:

holding means for holding released addresses;

detecting means for detecting that a packet has been addressed to a released address held in the at least one holding means; and

returning means for returning the held address to which the packet has been addressed to an end of the at least one holding means, wherein the size of the at least one holding means is variable and depends on ~~stack implementations~~ a number of released addresses of correspondent nodes of previous users ~~of released addresses~~, and wherein a next address that is selected to be reassigned for a next new user is selected from a first address position of the holding means.

21. (Currently Amended) An apparatus, comprising:

receiving means for receiving a packet addressed to an unused address; and

sending means for sending an error notification to a network node configured to manage addresses, the error notification indicating the unused address, wherein the error notification causes a return of a released address held in a queue and corresponding to the unused address to an end of the queue, the queue holding released addresses, wherein the size of the queue is variable and depends on ~~stack implementations~~ a number of released addresses of correspondent nodes of previous users ~~of released addresses~~, and wherein a

next address that is selected to be reassigned to a next new user is selected from a first address position of the queue.

22. (Cancelled)

23. (New) The method according to claim 14, further comprising:

sending an error notification to a source of a packet upon detection that a packet has been addressed to the released address held in the at least one queue.

24. (New) The method according to claim 14, further comprising:

detecting that a packet has been addressed to the released address held in the at least one queue by receiving the packet addressed to the released address.

25. (New) The method according to claim 14, further comprising:

detecting that an address of a user has been released by detecting a loss of a connection which releases its address.

26. (New) The method according to claim 14, further comprising:

detecting that a packet has been addressed to the released address held in the at least one queue by receiving an error notification indicating an unused address.

27. (New) The method according to claim 14, further comprising:

detecting that an address of a user has been released by receiving a notification thereon.